FIG. 1

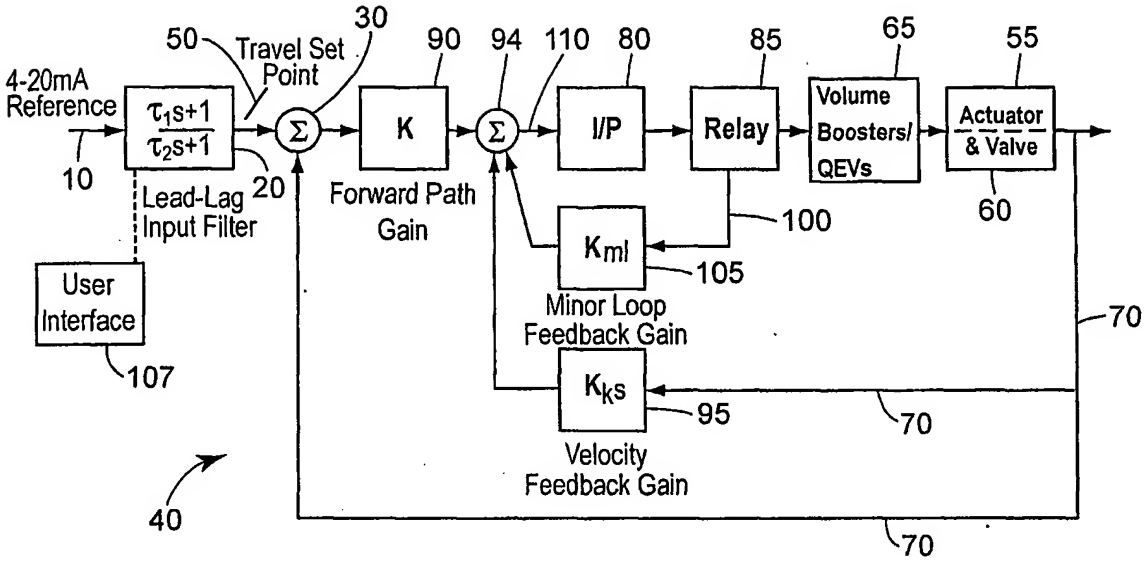

4-20mA Reference
10
50
Travel Set Point
30
20
Lead-Lag Input Filter
User Interface
107
K
Forward Path Gain
90
94
110
80
I/P
85
Relay
65
Volume Boosters/ QEVs
55
Actuator & Valve
60
100
K_{ml}
105
Minor Loop Feedback Gain
K_{ks}
95
Velocity Feedback Gain
70
40

FIG. 2

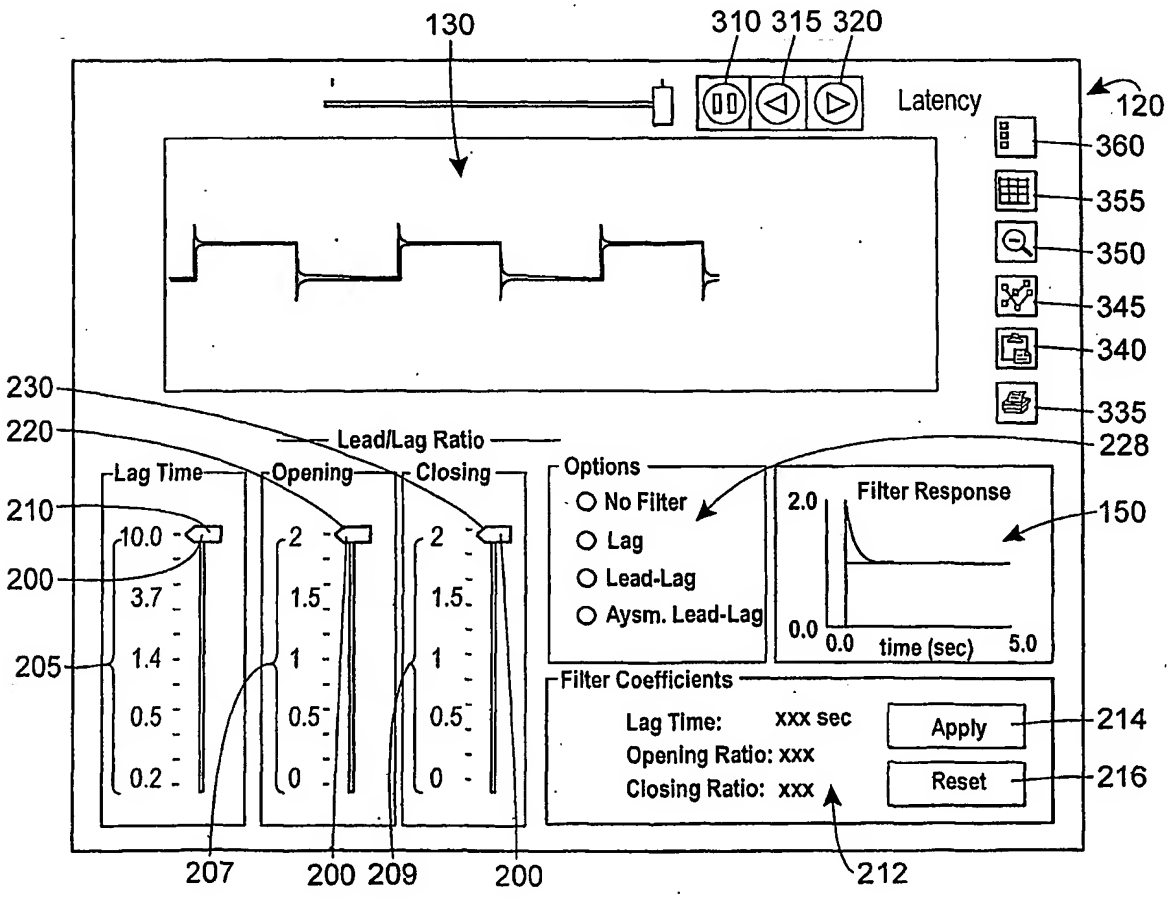

130
310 315 320
Latency
120
360
355
350
345
340
335
230
220
Lead/Lag Ratio
228
Lag Time
Opening
Closing
210
200
205
10.0
3.7
1.4
0.5
0.2
2
1.5
1
0.5
0
Options
No Filter
Lag
Lead-Lag
Aysm. Lead-Lag
Filter Response
2.0
0.0
0.0
time (sec)
5.0
150
Filter Coefficients
Lag Time: xxx sec
Opening Ratio: xxx
Closing Ratio: xxx
Apply
214
Reset
216
207
200
209
200
212

FIG. 3

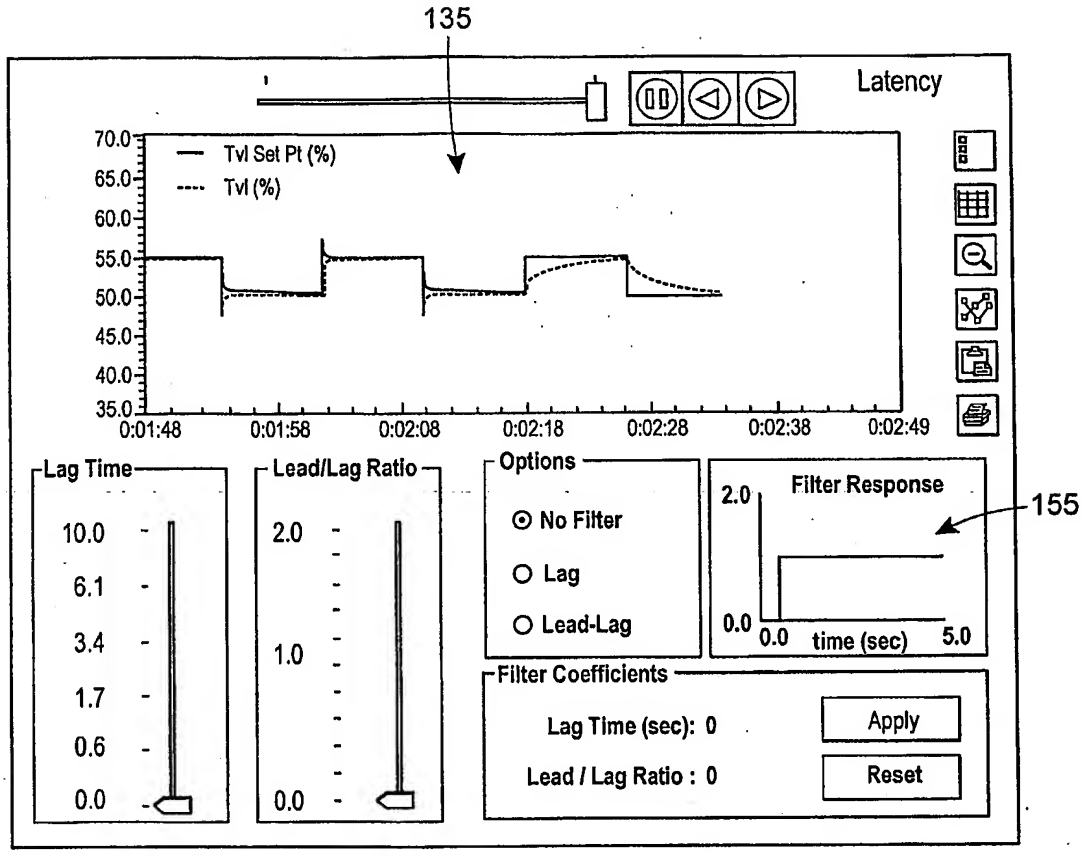

135
Latency
70.0
65.0
60.0
55.0
50.0
45.0
40.0
35.0
Tvl Set Pt (%)
Tvl (%)
0:01:48
0:01:58
0:02:08
0:02:18
0:02:28
0:02:38
0:02:49
Lag Time
10.0
6.1
3.4
1.7
0.6
0.0
Lead/Lag Ratio
2.0
1.0
0.0
Options
No Filter
Lag
Lead-Lag
Filter Response
2.0
0.0
0.0
time (sec)
5.0
155
Filter Coefficients
Lag Time (sec): 0
Lead / Lag Ratio : 0
Apply
Reset

FIG. 4

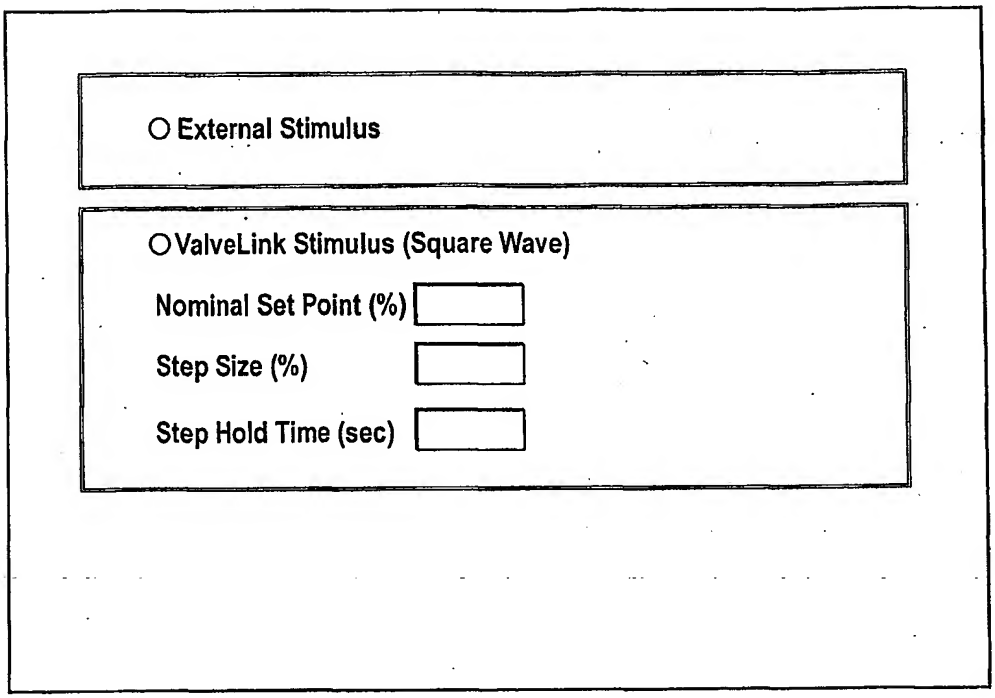

External Stimulus
ValveLink Stimulus (Square Wave)
Nominal Set Point (%)
Step Size (%)
Step Hold Time (sec)

FIG. 7

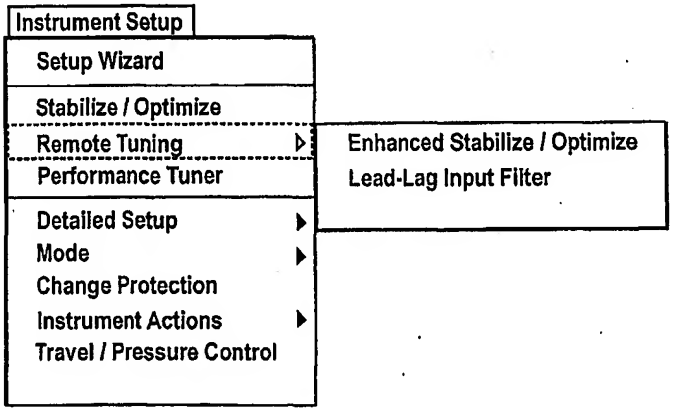

Instrument Setup
Setup Wizard
Stabilize / Optimize
Remote Tuning
Performance Tuner
Detailed Setup
Mode
Change Protection
Instrument Actions
Travel / Pressure Control
Enhanced Stabilize / Optimize
Lead-Lag Input Filter

FIG. 5

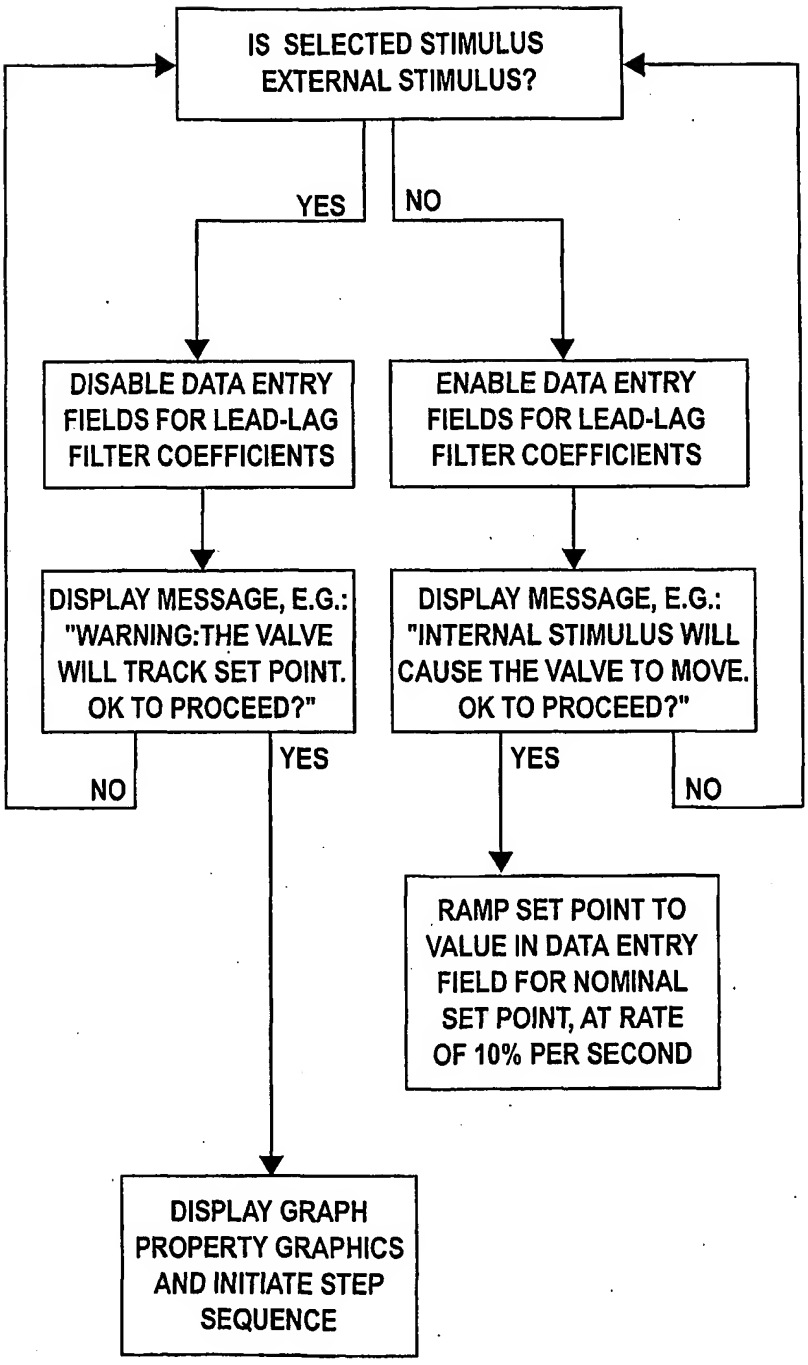
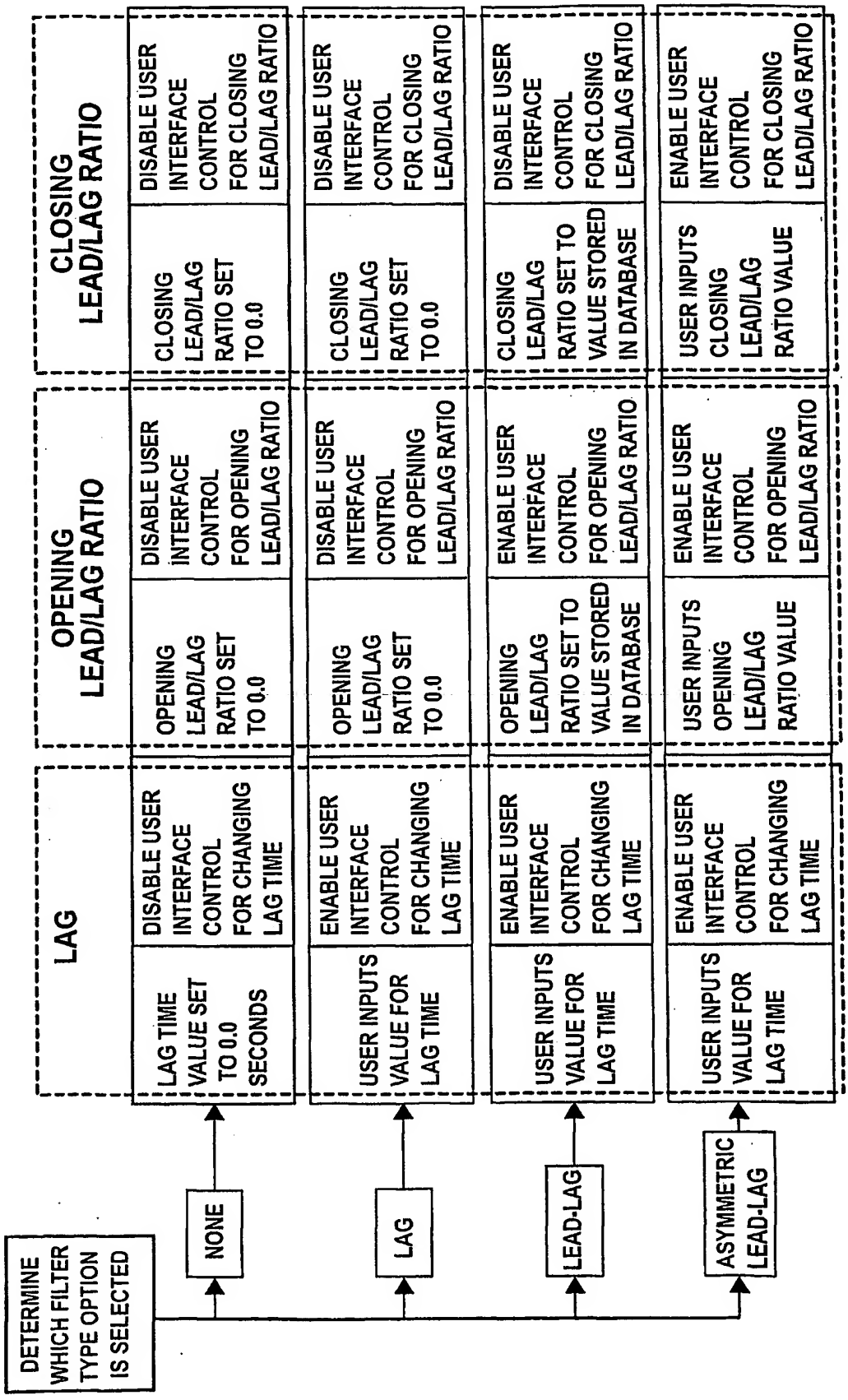

IS SELECTED STIMULUS EXTERNAL STIMULUS?
YES
NO
DISABLE DATA ENTRY FIELDS FOR LEAD-LAG FILTER COEFFICIENTS
ENABLE DATA ENTRY FIELDS FOR LEAD-LAG FILTER COEFFICIENTS
DISPLAY MESSAGE, E.G.: "WARNING:THE VALVE WILL TRACK SET POINT. OK TO PROCEED?"
DISPLAY MESSAGE, E.G.: "INTERNAL STIMULUS WILL CAUSE THE VALVE TO MOVE. OK TO PROCEED?"
NO
YES
YES
NO
RAMP SET POINT TO VALUE IN DATA ENTRY FIELD FOR NOMINAL SET POINT, AT RATE OF 10% PER SECOND
DISPLAY GRAPH PROPERTY GRAPHICS AND INITIATE STEP SEQUENCE

FIG. 6


DETERMINE WHICH FILTER TYPE OPTION IS SELECTED
NONE
LAG
LEAD-LAG
ASYMMETRIC LEAD-LAG
LAG
LAG TIME VALUE SET TO 0.0 SECONDS
DISABLE USER INTERFACE CONTROL FOR CHANGING LAG TIME
USER INPUTS VALUE FOR LAG TIME
ENABLE USER INTERFACE CONTROL FOR CHANGING LAG TIME
OPENING LEAD/LAG RATIO
OPENING LEAD/LAG RATIO SET TO 0.0
DISABLE USER INTERFACE CONTROL FOR OPENING LEAD/LAG RATIO
USER INPUTS OPENING LEAD/LAG RATIO VALUE
ENABLE USER INTERFACE CONTROL FOR OPENING LEAD/LAG RATIO
CLOSING LEAD/LAG RATIO
CLOSING LEAD/LAG RATIO SET TO 0.0
DISABLE USER INTERFACE CONTROL FOR CLOSING LEAD/LAG RATIO
CLOSING LEAD/LAG RATIO SET TO VALUE STORED IN DATABASE
USER INPUTS CLOSING LEAD/LAG RATIO VALUE
ENABLE USER INTERFACE CONTROL FOR CLOSING LEAD/LAG RATIO